

Work Plan Prioritization Procedure

ComEd Administrative Procedure

AM-CE-9067

Revision No.: 3

Effective: 2/22/2019
Supersedes: N/A
Level: 3
Review Type: 3 Year
Core Function: Cost Management

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1. Purpose

- 1.1. The purpose of this document is to discuss the Work Plan Prioritization Procedure, which is the risk based tool used by Operations to systematically and quantitatively prioritize the Work Plans.
- 1.2. The Work Plan Prioritization tool allows ComEd to identify, assess, and prioritize system investments and initiatives. This ensures that they add value to ComEd and are consistent with the Company's objectives. Moreover, the Work Plan Prioritization assists senior management with the decision-making process of optimizing the portfolio of ComEd's investments.
- 1.3. Work Plan Prioritization guarantees that projects are properly prioritized and that the prioritization is consistent for all work disciplines and is aligned with the existing approval processes.

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- 1.4. Work Plan Prioritization ensures that the desired delivery system functionality is achieved at the least cost, without sacrificing safety, environmental stewardship, or system reliability.
- 1.5. Work Plan Prioritization is not intended to determine if an ITN should be funded. The funding decision is made by the Category Owners. However, the associated Risk Score should be considered when building a work plan to ensure that the right work is budgeted.
- 1.6. Work Plan Prioritization is a two-step process: The first step is the development and documentation of a Risk Score. The second step is to challenge the assumptions used to determine the probability of failure and/or the consequence. The challenge takes place by the Asset Performance & Investment Strategy (AP&IS) Team and during the AIC meetings after the completion of planning diagrams or explicit identification of the assets involved.
- 1.7. The Work Plan Prioritization procedure does not apply to emergent or emergency work (see [CM-CE-P056](#)). Similarly, work that is mandated by law or by written correspondence between ComEd and the regulatory or oversight agency is not prioritized.

2. Precautions and limitations

- 2.1. Precautions
 - 2.1.1 None
- 2.2. Limitations
 - 2.2.1 None

3. Prerequisites

- 3.1. Risk Score developers must attend a Web-based training or be trained by AP&IS personnel before starting the Work Plan Prioritization.

4. Procedure

- 4.1. Overview
 - 4.1.1 This procedure is illustrated in Attachment AM-CE-9067-1, Work Plan Prioritization Flowchart. This procedure applies to the fiscal budgeting, AIC meeting and the PRC meeting.
- 4.2. Work Plan Data Entry
 - 4.2.1 ITN owner or ITN designees will enter the Work Plan information into Clarity.

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- 4.2.2** The data entry guidelines will be issued by the AP&IS team on the classification of the mandatory Work Plans as well as the Work Plans to be prioritized (i.e. discretionary Work Plans).
- 4.2.3** Executive Category Owners will examine the work plan information and cost data to ensure proper capital and expense splits.
- 4.2.4** The AP&IS team will monitor the status of the data entry.
- 4.2.5** The AP&IS team will produce mandatory work plan reports as well as the report of the work plan to be prioritized.
- 4.2.6** The AP&IS team will make sure that the mandatory Work Plans are categorized properly according to the defined guidelines.
- 4.3. Work Plan Prioritization**
 - 4.3.1** Executive Category Owners will assign Risk Score Developers for their category.
 - 4.3.2** A Risk Score Developer must attend a Web-based training or be trained by AP&IS personnel before starting the Work Plan Prioritization.
 - 4.3.3** A Risk Score Developer will work with ITN Owners/ITN designees on Work Plan characteristics and prepare information necessary to ensure accurate and unbiased prioritization.
- 4.4. Work Plan Prioritization Documentation**
 - 4.4.1** A Risk Score Developer will prepare documentation and develop Risk Scores for work plan prioritization.
 - 4.4.2** A Risk Score Developer will develop Risk Scores using the Risk Scoring Template and forward the completed form to AP&IS.
 - 4.4.3** A fact based justification is required for the Risk Score Template's responses for the purpose of documentation and quality assurance.
 - 4.4.4** The Risk Score data will be loaded into Clarity to provide the priority for the budgeting process.
- 4.5. Work Plan Prioritization Reports**
 - 4.5.1** AP&IS team will review the Risk Scoring data with the Risk Score Developers to ensure accurate and unbiased prioritizations within the category and across the other categories.
 - 4.5.2** Review of the Risk Scores will be conducted in accordance with the overall budget process schedule, before the final Work Plans are finalized.
 - 4.5.3** Clarity will generate reports containing ITN Risk Scores for all discretionary Work Plans identified for the budget year.
 - 4.5.4** AP&IS will export the work plan prioritization data inputted into Clarity to a predefined spreadsheet format.

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- 4.5.5 AP&IS will send out the data summary, grouped by the executive category, to the category owners and the Risk Score Developers.
- 4.5.6 AP&IS team will generate the Risk Score and Ranking report which contains ITN Risk Scores.
- 4.5.7 The Risk Score report will be examined for any possible errors including abnormal scores in any dimensions of the Risk Score Matrix.
- 4.6. Work Plan Prioritization For The AIC and PRC Meetings
 - 4.6.1 All discretionary projects submitted to the PRC meeting for approval must be prioritized using the Work Plan Prioritization and contain a current risk score.
 - 4.6.2 The prioritization data input has to be completed prior to the project being presented at AIC.
 - 4.6.3 AP&IS will update the Risk Score report with the revised ITN data and present the updated Risk Scores at PRC meetings as requested by the PRC chair.

5. Roles and responsibilities

- 5.1. Executive Category Owners
 - 5.1.1 Executive Category Owners are responsible for the appointment of a Risk Score developer and the oversight of the evaluation and validity of the developer's judgment.
- 5.2. Risk Score Developer
 - 5.2.1 Risk Score developers are responsible for developing Risk Scores and documenting the associated facts.
 - 5.2.2 Risk Score Developers are subject matter experts who have special technical skills and experience in the category, as well as broad knowledge of ComEd operations, to develop an accurate and unbiased Risk Score.
- 5.3. ITN Owners/ITN Designees
 - 5.3.1 ITN owners and ITN designees are responsible for the development of the Risk Scores and entering these scores into Clarity.
- 5.4. Asset Performance & Investment Strategy (AP&IS) Team
 - 5.4.1 The AP&IS Team provides main governance and oversight of the Work Plan Prioritization.
 - 5.4.2 The team is responsible for the modification of the investment portfolio to reflect the latest changes in the financial information for the budget year, the modification of the Risk Score template according to the latest ComEd management model, and the modification of the consequence tables.

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- 5.4.3 The team will control the administration of the Work Plan Prioritization.
- 5.4.4 The team will train Risk Score developers for the Work Plan Prioritization and Risk Score development and resolve any issues raised by designees during the development process in a professional and timely manner.
- 5.4.5 The team will perform a critical review and produce a summary for Category Owners and Risk Score developers to ensure an accurate and unbiased prioritization.
- 5.4.6 The team will monitor the Work Plan Prioritization by providing status reports, summary reports, as well as the final work plan prioritization report for the annual budget.
- 5.4.7 The team is responsible for generating the Work Plan Prioritization reports for the Project Review Committee's (PRC) meeting upon request to provide an analysis and to facilitate the decision making process.

6. Documentation

- 6.1. Documentation generated during performance of this document shall be filed in accordance with Exelon Corporate Procedure LE-AC-401 – Records and Information Management Retention and Disposition.
- 6.2. The EU Management Model Handbook can be viewed online through the link below:
[http://mgmtmodel.exeloncorp.com/Handbooks/Archive/EU%20MM%20Handbook%20\(3.1\).pdf#search=ComEd%20Management%20Model%20HandbookThe Work Planning and Tracking training document can be accessed through this link:](http://mgmtmodel.exeloncorp.com/Handbooks/Archive/EU%20MM%20Handbook%20(3.1).pdf#search=ComEd%20Management%20Model%20HandbookThe%20Work%20Planning%20and%20Tracking%20training%20document)
<https://exeloncorp.sharepoint.com/sites/ApplicationSupport/default.aspx>

7. Terms and definitions

- 7.1. Project Review Committee (PRC)
 - 7.1.1 The Project Review Committee (PRC) is comprised of senior management responsible for reviewing and managing the technical and financial merit of current and planned projects. All projects with a total cost of greater than \$500K are submitted to the PRC for funding approval as part of the three-phase approval process. The PRC can authorize work activities costing between \$500K and \$5M
- 7.2. Asset Investment Committee (AIC)

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7.2.1 The Asset Investment Committee (AIC) is comprised of Executive Category Managers and is responsible to challenge identified issues and evaluate their alignment with ComEd's strategic directions. The committee recommends projects to the PRC for funding. The AIC pre-screens projects for presentation to the PRC to ensure the merits of the project are sound and the selected alternative is appropriate. **AM-ED-201** defines the roles of the AIC.

7.3. Investment Category

7.3.1 Categories that designate a functional type of work.

7.4. Work Plans

7.4.1 Work Plans are categorized as Investment Categories and classified as projects, baseline, and annual Work Plans. The Work Plans are also separated into mandatory and discretionary Work Plans for prioritization purposes.

7.5. Mandatory Work Plans

7.5.1 Work Plans that are required to:

7.5.1.1 Meet safe system operations

7.5.1.2 Meet minimum requirements of serving a customer's load

7.5.1.3 Comply with legal or regulatory mandate. This includes projects that are not specifically required by regulation but are committed to action with a due date established via written correspondence between ComEd and the regulatory or oversight agency

7.5.1.4 The mandatory Work Plans include the following categories:

7.5.1.4.1 New Business

7.5.1.4.2 Facility Relocation

7.5.1.4.3 Emergent Corrective Maintenance

7.5.1.4.4 System Performance (mandated)

7.5.1.4.5 Preventive Maintenance (mandated)

7.5.1.4.6 Vegetation Management (mandated)

7.5.1.4.7 Environmental (mandated)

7.5.1.4.8 Capacity Expansion (mandated)

7.6. Discretionary Work Plans:

7.6.1 Work Plans that are designed to improve ComEd's system performance. The discretionary Work Plans include the following Investment Categories:

7.6.1.1 Corrective Maintenance (non Emergent)

7.6.1.2 Preventative Maintenance

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7.6.1.3 System Performance

7.6.1.4 Capacity Expansion

7.6.1.5 Utility Advancement

7.6.1.6 Environmental

7.7. Investment Tracking Number (ITN):

7.7.1 Unique identifier used to define a specific scope of work. Work Plans are determined at the ITN levels. EPS projects associated with an ITN are used to track actual costs incurred.

7.8. Clarity

7.8.1 Software that supports Work Planning and Tracking (WPT) for EU Utilities.

7.9. Material Condition Improvement Plan (MCIP)

7.9.1 Identifies system reliability improvement items on an on-going basis. These are either currently being evaluated or have been approved to be acted on.

7.10. Risk

7.10.1 Risk is defined as the rate or probability of failure and the impact or consequence of that failure.

7.11. Risk Score Matrix

7.11.1 The risk score matrix is a tool used for portfolio risk management and investment ranking. The consequence is assessed on a scale of 1 to 7, where 1 and 7 represent the minimum and maximum possible consequence of an event, respectively. The probability of failure is likewise assessed on a scale from 1 to 7, where 1 represents a low probability while 7 represents a high probability of failure. The risk matrix is a composite 7x7 matrix where 49 cells are identified by numerical designation, ranging from 1 to 49, called risk scores. Therefore the higher the risk score, the greater the risk. Investment Tracking Number (ITN) owners are responsible for providing an accurate Risk Score for their ITN and associated projects.

7.12. Consequence Tables

7.12.1 Consequence tables consist of three tables that were developed to evaluate the various consequences associated with each project. These tables provide consequence scores ranging from 1 to 7 based upon Reliability, Environmental, and Safety.

7.13. Probability Tables

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7.13.1 Probability tables contain four tables that were developed to evaluate the various probability of failure associated with each project. These tables provide probability scores ranging from 1 to 7 based upon applicable condition for the highest probable event. Applicability of these tables is determined by whether these three conditions are met:

7.13.1.1 Time to failure is known

7.13.1.2 Coincident event is needed for impact

7.13.1.3 Either earliest asset of failure is reached or history of similar asset is known

7.14. Risk Scores

7.14.1 Three Risk Scores are determined for each project using the three consequence tables. A composite Risk Score is derived by selecting the highest Risk Score from the three individual Risk Scores. This composite Risk Score becomes the one and only Risk Score used for the project.

7.15. Disaggregating An ITN

7.15.1 An ITN may be disaggregated in order to expose high Risk Scores for some projects associated with the same ITN. Consequently, the ITN is disaggregated by grouping all the projects under the same ITN by Risk Scores.

7.15.2 Similarly, an ITN that encompasses slightly different projects may be disaggregated and grouped by priority, voltage, or class of asset in order to highlight the dominating drivers of the ITN's projects.

8. References

- 8.1.** LE-AC-401 – Records and Information Management Retention Disposition
- 8.2.** [FI-ED-P015](#), Project Evaluation & Authorization Process
- 8.3.** [FI-ED-2001](#), Authorization of Projects
- 8.4.** [FI-ED-2004](#), Project Economic Analysis Guidelines
- 8.5.** [AM-ED-201](#), Asset Investment Committee
- 8.6.** [EX-ED-3002](#), Commitment Management Procedure
- 8.7.** [WM-ED-P025](#), 18 Month Work Plan

9. Attachments

- 9.1.** Attachment AM-CE-9067-1 Work Plan Prioritization Flowchart
- 9.2.** Attachment AM-CE-9067-2 Work Plan Prioritization Template
- 9.3.** Attachment AM-CE-9067-3 Reliability Consequence Matrix

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- 9.4. Attachment AM-CE-9067-4 Health & Safety Consequence Matrix
- 9.5. Attachment AM-CE-9067-5 Environmental Consequence Matrix
- 9.6. Attachment AM-CE-9067-6 Time to Failure Probability Matrix
- 9.7. Attachment AM-CE-9067-7 Time to Certain Event Probability Matrix
- 9.8. Attachment AM-CE-9067-8 Time to Failure and Coincident Event Probability Matrix
- 9.9. Attachment AM-CE-9067-9 Time to Certain and Coincident Event Probability Matrix

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10. Development history

Revision 0		Date: 5/25/2012
Writer	Greg Tierney, Mgr Investment Strategy, AP&IS	
Reviewer(s)	Sharon Pluskis, Mgr Investment Strategy, AP&IS; Ken Wendt, Mgr Material Condition, AP&IS	
UFAM Approver(s)	William Fluhler, Asset Management, Dir AP&IS	
Reason written	To support and facilitate ComEd in making investment decisions based on Com Ed's Risk Score Matrix. Replaces document AM-ED-1043.	

Revision 1		Date: 8/12/2015
Writer	N/A	
Reviewer(s)	N/A	
UFAM Approver(s)	N/A	
Reason written	Moved to new template; no content revisions included.	

Revision 2		Date: 8/13/2015
Writer	Max Leichtman, Mgr Investment Strategy, AP&IS	
Reviewer(s)	Ken Wendt, Mgr. Material Condition, AP&IS	
UFAM Approver(s)	Christ Siambekos, Director Finance	
Reason written	Cyclical review; updated to reflect current practice.	

Revision 3		Date: 2/22/2019
Writer	Christopher Oliphant	
Reviewer(s)	Max Leichtman, Mgr Investment Strategy, AP&IS	
UFAM Approver(s)	Kim Joseph, Director Finance	
Reason written	Cyclical review; updated to reflect current practice.	

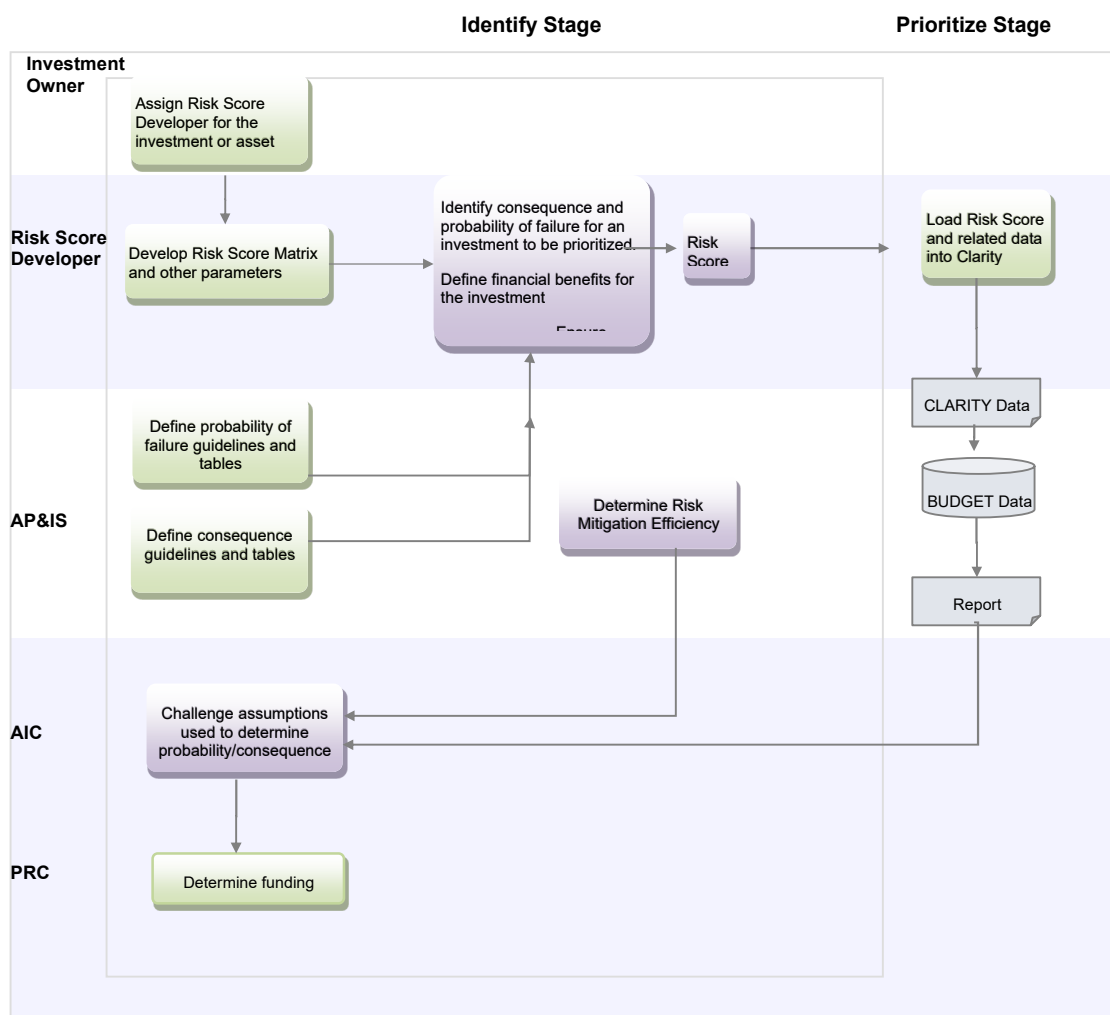
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AM-CE-9067-1 Work Plan Prioritization Flowchart



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AM-CE-9067-2 Work Plan Prioritization Template

UNIQUE ITN	#	NAME	Project Name		SCORE*	#
T, S OR D	CATEGORY	Category name	Sub-category	Sub-category description		
SCORER	NAME	BUDGET YEAR	20##	CAPITAL SPEND (\$ 000)	###	
TYPE	PROJECT/PROG/BLANKET	UNITS	#	O&M SPEND (\$ 000)	###	

SAFETY	CONSEQUENCE	#	PROBABILITY	#	
	Description Risk Score Developer		Description		
ENVIRONMENTAL	CONSEQUENCE	#	PROBABILITY	#	
	Description		Description		
RELIABILITY	CONSEQUENCE	#	PROBABILITY	#	
	Description		Description		

* To determine overall risk score, select maximum of individual risk scores

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AM-CE-9067-3 Reliability Consequence Matrix

Score	Financial Impact	Distribution			Transmission
		Loss of Service	Customer Minutes Interrupted	Power Loss	Loss of Supply
1	<\$5k	<100 customers	<10k CMI	<1 MW	
2	\$5k-25k	<500 customers	<50k CMI	<4 MW	
3	\$25k-100K	500-5,000 customers	50k-500k CMI	4-8 MW	
4	\$100k-500k	5,000-10,000 customers	500k-1M CMI	8-16 MW	<50 MWs
5	\$500k-3M	10,000-25,000 customers	1-5M CMI	16-40 MW	50-250 MW
6	\$3M-10M	25,000-50,000 customers	5M-20M CMI	40-80 MW	250-1,000 MW
7	\$10M +	50,000+ customers	20M+ CMI	80+ MW	1,000+ MW

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AM-CE-9067-4 Health Consequence Matrix

Score	Financial Impact	Employee Incident	Public Incident
1	<\$5k	<ul style="list-style-type: none"> • Minor injury requiring First Aid with quick and complete recovery • Minor illness with up to one-week absence • No permanent health consequences 	
2	\$5k-25k	<ul style="list-style-type: none"> • Injury or illness to employees with over one week absence • No permanent health consequence 	
3	\$25k-100K		<ul style="list-style-type: none"> • Injury or illness to member of public requiring medical treatment • No permanent consequences
4	\$100k-500k	<ul style="list-style-type: none"> • Permanently incapacitating injury or illness to employees • Moderate to severe pain for 1-4 weeks with possible recurrence of pain for certain activities and some permanent restrictions to leisure or work 	<ul style="list-style-type: none"> • Injury to member of public requiring extended medical treatment • No permanent consequences
5	\$500k-3M	<ul style="list-style-type: none"> • Fatality to employee 	<ul style="list-style-type: none"> • Permanently incapacitating injury to a member of public
6	\$3M-10M	<ul style="list-style-type: none"> • Multiple fatalities to employees (<4 people) 	<ul style="list-style-type: none"> • Fatality to a single member of public
7	\$10M +	<ul style="list-style-type: none"> • Multiple fatalities of 5 or more employees 	<ul style="list-style-type: none"> • Multiple public fatalities

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AM-CE-9067-5 Environmental Consequence Matrix

Score	Financial Impact	Geographic Scale	Duration	Description	Reputation	Regulatory / Legal
1	<\$5k	<ul style="list-style-type: none"> Concentrated Within site boundaries Less than 1 acre Power plant, substation, adjacent to pole or transformer Caustic spill 	<1 day	<ul style="list-style-type: none"> No measurable change to the environment Oil spill contained within dike Small quantities of hazardous waste left on site No measurable incremental contribution to other known environmental impacts (e.g. ground level ozone formation) 	<ul style="list-style-type: none"> No media coverage No public response 	<ul style="list-style-type: none"> Not regulated No related compliance issues
2	\$5k-25k	<ul style="list-style-type: none"> Concentrated Within site boundaries 1-10 acres Power plant, substation, adjacent to pole or transformer Chemical spill 	1-7 days	<ul style="list-style-type: none"> Significant environmental incident, but no measurable change to the environment Large oil spill contained within dike Large quantities of hazardous waste left on site No measurable incremental contribution to other known environmental impacts (e.g. ground level ozone formation) 	<ul style="list-style-type: none"> No media coverage No public response 	<ul style="list-style-type: none"> Not regulated No related compliance issues
3	\$25k-100k	<ul style="list-style-type: none"> Localized Limited to an area within the site boundaries 10-50 acres of land Chemical spraying of transmission corridor 	7-30 days	<ul style="list-style-type: none"> Measurable changes to the environment Plant and/or animal species impacted but none fatally No acute risk to human health Complete recovery likely, with little or no intervention WWTP effluent increasing suspended solids Surface sediment runoff and/or water discoloration Single event fossil plant start-up opacity excursions Measurable, but minimal contribution to other known pre-existing environmental impacts, without creating further measurable incremental adverse impacts (e.g. acid rain) 	<ul style="list-style-type: none"> Local and/or short-term media coverage Local unorganized public inquiries 	<ul style="list-style-type: none"> Subject to proposed legislation/regulation
4	\$100k-500k	<ul style="list-style-type: none"> Dispersed Affects areas adjacent to the site and not under company control Surrounding land parcels Substantially impacts local community 50-100 acres Coal pile dust 	1-3 months	<ul style="list-style-type: none"> Limited mortality to plant and/or animal populations No permanent loss of habitat and/or species Potential for acute risk to human health Potential for complete recovery, with intervention Minor oil/chemical spills outside containment Cooling water thermal excursion events Measurably increases environmental impact associated with other known pre-existing impacts (e.g. GHG accumulation) 	<ul style="list-style-type: none"> Regional and/or recurring media coverage Organized stakeholder actions/demands Local protests 	<ul style="list-style-type: none"> Subject to government regulation Regulation not yet in effect

Score	Financial Impact	Geographic Scale	Duration	Severity	Reputation	Regulatory / Legal
5	\$500k-3M	<ul style="list-style-type: none"> Widely dispersed Affects areas adjacent to the site and not under company control Surrounding land parcels Substantially impacts local community 100-1000 acres 	3-12 months	<ul style="list-style-type: none"> Limited mortality to plant and/or animal populations No permanent loss of habitat and/or species, but damage to environmentally sensitive sites or sites of special scientific interest Potential for acute risk to human health Potential for complete recovery, with intervention Minor oil/chemical spills outside containment Cooling water thermal excursion events Measurably increases environmental impact associated with other known pre-existing impacts (e.g. GHG accumulation) 	<ul style="list-style-type: none"> Regional and/or recurring media coverage Organized stakeholder actions/demands Local protests 	<ul style="list-style-type: none"> Subject to government regulation Regulation in effect
6	\$3M-10M	<ul style="list-style-type: none"> Regional Affects multi-county regions, including streams, watersheds, and regional air basins 100s of square miles of land SOx and NOx emissions 	1-100 years	<ul style="list-style-type: none"> Measurable damage to the environment Substantial loss of habitat, plant and/or animal populations Contamination of ground water source Potential chronic risk to human health Potential for substantial recovery, with significant intervention Significantly increases environmental impact associated with other known pre-existing impacts Major oil/chemical spill Storage tank failure 	<ul style="list-style-type: none"> National and/or sustained media coverage Sustained stakeholder action Political ramifications Stakeholder litigation Shareholder proxies Customer boycotts Grand jury investigation 	<ul style="list-style-type: none"> Subject to government regulation Potential for NOVs, fines, Civil and Criminal actions
7	\$10M +	<ul style="list-style-type: none"> National/global Affects nation's, and/or contributes to global impact GHG releases 	Permanent or multiple lifetimes	<ul style="list-style-type: none"> Catastrophic changes to the environment Entire loss of habitat, plant, and/or animal populations/species Chronic threat to human health Unrecoverable damage/loss Significantly contributes to known pre-existing impacts becoming severe Chronic release of mercury to environment Loss of endangered species population PCB contamination 	<ul style="list-style-type: none"> Collapse of institutional goodwill Stock price significantly discounted Officer resignations demanded 	<ul style="list-style-type: none"> Subject to government regulation An active area for enforcement action

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AM-CE-9067-6 Probability Matrix Time to Failure

- Time to failure is known.
- Coincident event is not needed for impact.
- Earliest asset of failure has not been reached.

Time to failure (in years)	Likelihood level
<1 years	7
1 to 3 years	6
3 to 5 years	5
5 to 10 years	4
10 to 20 years	3
20 to 100 years	2
>100 years	1

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AM-CE-9067-7 Probability Matrix Time to Certain Event

- Time to failure is known AND earliest asset of failure has not been reached
AND coincident event is not needed for impact.

OR

- Time to failure is not known AND history of similar failures is available AND
coincident event is not needed for impact.

Years to certain impact	Likelihood level	Probability of certain impact happening next year
1	7	100%
2	7	50%
3	6	33%
5	6	20%
6	5	17%
10	5	10%
20	4	5%
100	4	1%
200	3	0.5%
500	2	0.2%
1000	2	0.1%
2000	1	0.05%

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AM-CE-9067-8 Probability Matrix Time to Failure AND Coincident Event

- Time to failure is known.
- Coincident event is needed for impact.
- Earliest asset of failure has not been reached.

		Time to coincident event									
		1	2	3	4	5	10	20	33	100	1000
Time to failure	<1 years	7	7	6	6	6	5	4	4	4	2
	1 to 3 years	6	6	6	6	5	5	4	4	4	2
	3 to 5 years	5	5	5	5	5	4	4	4	3	1
	5 to 10 years	4	4	4	4	3	3	2	2	1	1
	10 to 20 years	3	3	3	3	3	2	2	1	1	1
	20 to 100 years	2	2	2	2	2	2	1	1	1	1
	>100 years	1	1	1	1	1	1	1	1	1	1
		100%	50%	33%	25%	20%	10%	5%	3%	1%	0.1%
Likelihood of coincident event											

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AM-CE-9067-9 Probability Matrix Time to Certain Event AND Coincident Event

- Time to failure is known AND earliest asset of failure has not been reached AND coincident event is needed for impact.

OR

- Time to failure is not known AND history of similar failures is available AND coincident event is needed for impact.

		Time to coincident event											
		1	2	3	4	5	10	20	33	100	1000		
Years to certain impact (assuming uniform likelihood)	1	7	7	6	6	6	5	4	4	4	2	100%	Probability of certain impact happening in the next year
	2	7	6	6	6	6	5	4	4	4	2	50%	
	3	6	6	6	6	5	5	4	4	4	2	33%	
	4	6	6	6	6	5	5	4	4	4	2	25%	
	5	6	6	5	5	5	5	4	4	3	2	20%	
	6	5	5	5	5	5	4	4	4	3	1	17%	
	7	5	5	5	5	5	4	4	4	3	1	14%	
	8	5	5	5	5	5	4	4	4	3	1	13%	
	9	5	5	5	5	5	4	4	4	3	1	11%	
	10	5	5	5	5	5	4	4	4	3	1	10%	
	20	4	4	4	4	4	4	4	3	2	1	5%	
	50	4	4	4	4	4	4	3	3	2	1	2%	
	100	4	4	4	4	4	3	3	2	2	1	1%	
	200	3	3	3	3	3	2	2	2	1	1	0.5%	
500	2	2	2	2	2	2	2	1	1	1	0.2%		
1,000	2	2	2	2	2	2	1	1	1	1	0.1%		
2,000	1	1	1	1	1	1	1	1	1	1	0.05%		
		100%	50%	33%	25%	20%	10%	5%	3%	1%	0.1%		
Likelihood of coincident event													